ditions may exist for sometime without change in the ophthalmoscopic appearances of the eye-grounds; (2) cases of dementia precox, either slowly developing or rapidly deteriorating, present no associated disk changes peculiar to this condition, but rather a higher percentage of normal fundi than either the organic or functional group of psychoses; (3) in functional psychoses there is no definite association between the mental disorder and the ophthalmoscopic appearance of the fundus.

The Scientific Basis of Potassium Iodide in Arteriosclerosis.—FLURY (*Archiv. of Ophthal.*, July, 1914, p. 405) summarizes the results of experimental investigation as follows: The drug has a pronounced salt action, whereby it modifies osmotic processes and increases cellular activity. In addition the specific effect of the ions must be regarded. The potassium by its action on the central nervous system and muscles facilitates the transport of the salt in the tissues and the exchange of ions, and also causes special changes in the mineral metabolism. The peculiar distribution of iodine in the body shows that it has a distinct affinity for certain tissues. As regards arteriosclerosis, the arterial vessels as well as the glandular cells and many diseased tissues are able to collect iodine. The therapeutic use of iodide of potash may not only influence metabolism, but directly affect the vascular elements in arteriosclerosis. The reduction of the friction of the blood which potassium iodide causes may result in an improvement in the circulation and increased diapedesis. It may also be assumed, from the known effects of poisoning with iodine in man, that the reduction of blood-pressure plays a role in the action of the remedy. Iodide of potash cannot be replaced by any other salt or any of the numerous modern substitutes, inasmuch as its therapeutic effect depends upon the salt, the potassium and the iodine, of which the latter is probably the most important.

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

JOHN McCRAE, M.D., M.R.C.P.,
LECTURER ON PATHOLOGY AND CLINICAL MEDICINE, MC GILL UNIVERSITY, MONTREAL; SOME TIME PROFESSOR OF PATHOLOGY IN THE UNIVERSITY OF VERMONT, BURLINGTON, VERMONT; SENIOR ASSISTANT PHYSICIAN, ROYAL VICTORIA HOSPITAL, MONTREAL.

How Salivary Secretion is Influenced.—WERTHEIMER and BATTEZ (*Jour. de Physiol. et de Path. Gén.*, November 15, 1913, vol. xv, No. 6) have undertaken experiments to decide the question of how the salivary glands are stimulated to secretion. It will be remembered that Cohnheim and Lichtheim found that salivary secretion increased if saline solution was introduced into the circulation. They considered that salivary secretion was one means by which the body cleared itself of the excess of fluid. Later Cohnheim found that even without the assistance of the secretory nerves a hydremic condition led to an increase of the secretion, and sometimes to a distention and edema of the glands, and thought that these manifestations were entirely separate from the nervous system; he went further, and having paralyzed the chorda tympani by atropin, he still found that injection of saline was efficient in producing edema of the gland. Hamburger considered that there could be no salivary secretion without nervous excitation, and thought that the reason why solutions of certain salts caused salivation was by the eliminated salts impresssing the gustatory nerves. The authors think that gustatory excitation plays no part in the provocation of salivary secretion by the injection of salts, for after section or paralysis of the gustatory nerves, as well as after the injection of pure and distilled water, the salivation was obtained. They consider that the reactions of the submaxillary gland, either intact or deprived of its nerves, show that the secretion following transfusion of liquids into the blood is almost entirely under control of the central nervous system excited directly by the heightened blood-pressure. Such excitation they consider is transmitted by the chorda tympani. Compression of the abdominal aorta, which increases the pressure in the subdiaphragmatic region, has the same result, although less marked, as follows the injection of saline, especially in animals whose blood is already in a hydramic state.

Carrot-juice Agar as a Medium.—Rochaix (*Jour. de Physiol. et de Path. Gên.*, November 15, 1913, vol. xv. No. 6) finds that carrot-juice agar is an extremely useful medium for the growth of colon, typhoid, and paratyphoid of many sorts, of which it gives abundant cultures in twenty-four hours at 37°. It is equally applicable to Bacillus pyocyaneus, anthrax, Streptococcus pyogenes, and the encapsulated group, while, on the contrary, it is unfavorable to the development of staphylococcus, diphtheria, and pneumococcus. It is made as follows: carrots well washed are cut up and the juice expressed; 200 c.c. water is added to 800 c.c. of carrot juice, and agar is added, as in the preparation of ordinary peptone jelly, in the proportion of about 30 to 35 grams per 1000 c.c. The mixture is kept at 115° for twenty-five minutes in the autoclave; clarified with white of egg; alkalinized, and filtered. After being tubed it is sterilized again at 108° to 110°, after which the medium is more clear and transparent than the ordinary peptone jelly. The author has used also carrot juice, agar glycerinated, artichoke agar, potato agar, and beet-root agar, but finds that, everything considered, the first named is the best, for the reason that with simple economical preparation and absence of peptone it is yet possible to obtain luxuriant growths of the bacilli indicated, and very rapid growths of molds; while the production or absence of gas in the agar cultures is another differential characteristic which can be added to those already known as separating the colon-typhoid group from the encapsulated forms.

The Frequency of Tuberculosis.—Lubarsch (*Virch. Arch.*, 213, 417) publishes autopsy figures which are authoritative from Posen, Zurckau, and Düsseldorf, showing that tuberculosis was present in 57.4 per cent. of 7371 cases, whereas it was found in 69.2 per cent. of 5800 adolescents.